

GENERAL HEALTH AND PREVENTION

General Health and Prevention

Contributing Editors

Laura Blank, RN, MSN, Manager Perinatal Support Services
CalOPTIMA

Chris Burke, Director, Healthy Communities
St. Jude Medical Center

Robert C. Doubleday, DDS, Public Health Dental Officer
Orange County Health Care Agency

Marty Earlabough-Gordon, Executive Director
Coalition of Orange County Community Clinics

Sister Martha Ann Fitzpatrick, Vice President, Mission/Sponsorship
Mission Hospital Regional Medical Center

Hang Hguyen, MPH, Health Educator
CalOPTIMA

Nancy Morgan, Director, Product Line Development
UCI Medical Center

Deborah Shaw, Marketing and Community Benefits
Children's Hospital at Mission/Children's Hospital of Orange County

Gerald A. Wagner, M.D., MPH, FAAP, Public Health
Orange County Health Care Agency

HIGHLIGHTS FROM GENERAL HEALTH AND PREVENTION

The following information highlights the findings from the Orange County Health Needs Assessment (OCHNA) survey as they pertain to general health and prevention.

- ❖ Low income respondents to the OCHNA survey were less likely to be in “excellent” or “very good” health and more likely to be in “fair” or “poor” health than respondents in the middle or high income categories.
- ❖ 191,837 Orange County residents have not visited their doctor for a routine checkup in more than five years. When asked if their children had visited a doctor for a routine checkup in the last 12 months, 17.1% responded “no.” When asked why not, the number one reason was “no reason to go.” A person’s access to health care determines whether adequate preventive measures are taken. Early detection may result in lower medical costs for treatment. In addition, routine checkups are important because preventive measures resulting from early disease detection often offer a greater chance of treatment or cure.
- ❖ Women in the high income category were more likely to have received a clinical breast exam than women in low or middle income categories. Women in the high income category were also more likely to be shown by their doctor how to examine their own breasts and perform a breast self-examination.
- ❖ Prostate cancer incidence rates are nearly two times higher for black men than for white men; and the mortality rate is more than twice as high for black men. More than 75% of all prostate cancers are diagnosed in men older than 65. Male respondents in the low income category were 15% less likely to have had a blood test for prostate cancer than men in the high income category.
- ❖ Oral diseases are among the most common health problems in the United States according to the Healthy People 2000 Review (1997) which reports 94% of all adults show evidence of current or past tooth decay.
- ❖ OCHNA survey results show that 7.5% of respondents (151,397 Orange County residents) have not visited the dentist in more than five years. Results also indicate that respondents in the low income category were less likely to have visited a dentist in the last 6 months and more likely to have not seen a dentist in five or more years. The number one reason given by respondents in the low income category for not seeing a dentist within the past year was cost.
- ❖ According to the survey, 34.2% of respondents (685,580 Orange County residents) do not have dental health coverage. Income is a significant indicator of whether a person does or does not have dental health coverage.
- ❖ Nearly 900,000 Orange County residents are without vision health coverage. Respondents most likely to be without vision health coverage were in the low income category.
- ❖ According to the Healthy People 2000 Review (1997), 95% of HMOs cover immunizations. OCHNA data show the majority of respondents with health care coverage are covered by an HMO. This would lead one to believe the majority of Orange County’s children and adults are eligible to receive adequate immunizations. Yet, only 28.7% of respondents received flu shots in the past year and only 13.3% have ever had a pneumonia vaccination.

- ❖ According to the OCHNA survey, 42% of respondents are using contraception. The two most common forms are condoms (29.9%) and oral contraceptives (28.3%). People making more than \$50,000 annually were more likely than those making less than \$20,000 annually to respond that they used contraception.
- ❖ Reducing the incidence of low birth weight is one of the goals of Healthy People 2000 (1997). “Birth weight is one of the most important predictors of the overall health status and survivability of newborn infants.” According to Orange County Health Care Agency (HCA), infant mortality in Orange County accounted for 5.8 deaths per 1000 live births. Black infant mortality was the highest at 10.3 per 1000 live births.
- ❖ Survey results from the National Association of Insurance Commissioners showed that use of alternative therapies was not confined to any particular socioeconomic group. However, OCHNA respondents in the high income category showed a greater incidence of using alternative therapies. In all, 27.7% of respondents had used alternative therapies within the past year. The majority of those (65.7%) used the alternative therapy in addition to traditional medicine to treat an illness or condition.

Focus Group Comments

Focus group participants had some interesting input on general health and prevention. Below are some quotes taken from various focus group participants on topics central to general health.

The definition of health offered by focus group participants was broad and diverse. Participants in a children’s focus group had the following perceptions of what constitutes good health.

To be in good health means that you’re actually taking care of yourself....[and] knowing what your limitations are. Knowing right from wrong. (2:4)

Taking care of yourself, like not doing drugs. (2:4)

To know what to eat. Working out. (2:4)

Participants in the immigrant focus group had a very different concept of what good health encompasses.

I believe that in our culture, the Mexican culture, we have a holistic approach to health. We think it’s not just physical. We see it as spiritual, emotional, and that is all combined. (1:6-7)

For me more than anything, good health is to be right and healthy in order to work because if you are ill we can not do anything, right? We have to work hard and therefore we have to be in good health. (2:8)

For me good health is beginning with what we had previously said starting with hygiene, and also where one works knowing whether you can lift a heavy can or if you need to wear back support....Also...doing exercise is good for the body and more than anything drinking lots of water and trying to eat right. (2:8)

...A regular checkup. For instance, a lot of people could be ill with diabetes and not know that they are diabetic. But if they never get a checkup maybe they won’t find out until it’s too late [that they have diabetes]. (2:8)

A provider for the frail elderly had the following comment regarding seniors in ethnic populations accessing preventive health services.

...They're not as quick to access health screening opportunities, either. Whereas, when hospitals do advertise these health screenings and opportunities to go and get free inoculations or whatever, it's a high, high percentage of Caucasians that go to those. (1:14)

Providers in a focus group on children had the following concern over accessing dental care:

There are so many clinics....The problem is accessibility.(1:14)

...But they just really don't know a good place to go....I think there's a lot of fear really.(1:4)

The following definitions of good perinatal health were offered by participants in the pregnancy and maternal health focus group:

To take vitamins. (1:7)

To avoid drinking alcohol and smoking. (1:8)

...We must maintain a good diet as directed by the doctor, a proper timing of food intake and with proper quantity. (3:3)

One teen had this to say about finding information on perinatal health:

We always look for a person who has already had babies to tell us how does it feel, what do you think is going to happen? I mean, we always have fears about those things. (1:3)

Providers in the children's focus group had the following concerns and suggestions in regards to immunizations.

I think immunizations are a critical situation....Our babies are not being immunized at much more than a 55% ratio right at this time....I think we need to really make that a more important issue. (1:7)

Maybe we need to go to what they did in...Brazil, and they're planning to do it in India, to eradicate polio door to door and just immunize everybody who answers the door, whether [they're eligible for some program] or not. (1:16)

ROUTINE CHECKUPS SUMMARY

- ❖ Routine checkups are important as preventive measures resulting in early disease detection and therefore provide a greater chance of treatment or cure. Additionally, early detection may result in lower medical costs for treatment.
- ❖ Nearly 10% of Orange County residents (191,837 people) have not visited their doctor for a routine checkup in more than 5 years.
- ❖ Over 17% of the survey respondents indicated their children had not visited a doctor for a routine checkup in the last 12 months.
- ❖ Routine checkups such as mammograms, clinical breast exams, prostate cancer detection blood tests, immunizations, blood pressure and cholesterol checks, and dental and vision care can be seen as preventive measures.
- ❖ A person's access to health care determines whether adequate preventive measures will be taken.

ROUTINE CHECKUPS

Routine checkups are important as preventive measures resulting in early disease detection and therefore provide a greater chance of treatment or cure. Additionally, early detection may result in lower medical costs for treatment.

More than 191,000 Orange County residents have not visited their doctor for a routine checkup in more than 5 years. The last time respondents went to the doctor is shown below.

Within the last year	66.0%
Within the past 2 years	14.6%
Within the past 5 years	9.4%
5 years or more	10.0%

More than 17% of survey respondents indicated their children had not visited a doctor for a routine checkup in the last 12 months. The most common reason, cited by 65.3%, was “no reason to go.”

Routine checkups such as mammograms, clinical breast exams, prostate cancer detection blood tests, immunizations, blood pressure and cholesterol checks, and dental and vision care can be seen as preventive measures.

OCHNA survey respondents received the following preventive measures.:

- ❖ 59.6% of females had a mammogram
- ❖ 77.2% of females had a clinical breast exam within the last year
- ❖ 35.6% of males had a blood test for detecting prostate cancer
- ❖ 28.7% of respondents received an influenza vaccination within the last 12 months
- ❖ 13.3% of respondents received a pneumonia vaccination
- ❖ 85.5% of respondents received tetanus vaccinations
- ❖ 51.3% of respondents received treatment for high blood cholesterol
- ❖ 53.2% of respondents visited the dentist within the last 6 months

MAMMOGRAM/BREAST SELF-EXAM SUMMARY

- ❖ In 1998 more than 175,000 women were diagnosed in the U.S. with invasive breast cancer and nearly 44,000 were expected to die of this disease.
- ❖ Although most women are diagnosed with breast cancer after age 50, the number of women under 50 who are diagnosed with this disease has greatly increased. Breast cancer is the leading cause of cancer death in women aged 40 to 55.
- ❖ While breast cancer is usually associated with women, approximately 1,600 men were diagnosed with breast cancer in 1998.
- ❖ Mammograms and self-examination are 2 methods for early detection of breast cancer. Doctors recommend women over 40 have regular mammograms because the risk of breast cancer increases with age.
- ❖ Nearly 60% of female OCHNA survey respondents indicated they have had a mammogram; 87.1% have had clinical breast exams.
- ❖ Cancer is the second leading cause of death in the county and breast cancer is the leading cause of cancer deaths among women.

MAMMOGRAM/BREAST SELF-EXAM

According to the American Cancer Society, in 1998 alone more than 175,000 women were diagnosed with invasive breast cancer, and nearly 44,000 were expected to die from this disease. Although most women are diagnosed with breast cancer after age 50, the number of women under age 50 who are diagnosed with this disease has greatly increased. Breast cancer is the leading cause of cancer death in women aged 40 to 55. Although breast cancer is usually associated with women, approximately 1,600 men were diagnosed with breast cancer in 1998.

These statistics illustrate the need for preventive measures and the importance of early detection. Mammograms and self-examination are two methods for early detection of breast cancer. Regular breast self-examinations allow a woman to become familiar with how her breasts normally look and feel so any changes may be detected early. Women of all ages can perform the breast self-exams. A mammogram is a low-dose x-ray that can detect tumors up to two years before they can be felt. Doctors recommend that women over 40 have regular mammograms because the risk of breast cancer increases with age. Additionally, the following factors were found to put women at a higher risk for breast cancer.

- ❖ A personal or family history of breast cancer
- ❖ Biopsy-confirmed hyperplasia
- ❖ Early menarche
- ❖ Late menopause
- ❖ Recent use of oral contraceptives or postmenopausal estrogens
- ❖ Never had children or had the first live birth at a late age
- ❖ Higher education and socioeconomic status

Most women will have one or more risk factors for breast cancer; early detection, however, through mammograms and periodic breast self-exams is key to prevention and cure.

Nearly 60% of female OCHNA survey respondents indicated they have had a mammogram. (Please note that due to a systems error all females 18 and older were asked questions regarding mammograms and breast self-exams instead of only those older than 45.) More than 92% of those who have had a mammogram did so as part of a routine checkup, 5.8% because of a breast problem, and 1.8% because of a personal history of breast cancer. The table below shows the last time respondents received a mammogram.

Mammogram	Percentage (%)
Within the past year	64.2
Within the past 2 years	17.8
Within the past thr3 years	7.0
Within the past 5 years	4.8
More than 5 years ago	6.3

Clinical breast exams were reportedly received by 87.1% of female respondents. (Again, due to a systems error, all women 18 and older were asked this question instead of only those older than 45.) Most (95.2%) were performed as part of a routine checkup, 3.8% because of a breast problem, and 1% because of a personal history of breast cancer. The table below shows the last time respondents received a clinical breast exam.

Clinical breast exam	Percentage (%)
Within the past year	77.2
Within the past 2 years	12.8
Within the past 3 years	3.8
Within the past 5 years	2.0
More than 5 years ago	4.1

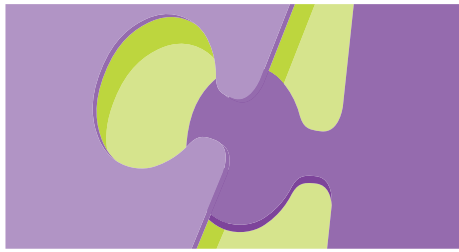
Most (85%) respondents indicated their doctor had shown them how to perform a breast self-exam and 81.2% have performed the breast self-exam at home. Of the 81.2%, 81.7% performed the breast self-exam within the last three months, 14.4% within the last three months to one year, 2.4% within the last two years, and 1.5% within the last three years.

Data collected by the Orange County Health Care Agency, California Department of Health Services, and the California Department of Finance provides the following mortality rates from breast cancer per 100,000 people.

Orange County	California	United States
20.1%	19.7%	21.0%

Although the mortality rate in Orange County is lower than the national rate and lower than the Healthy People 2000 guideline (20.6), it is higher than the mortality rate for California.

According to the Orange County HCA, cancer is the second leading cause of death in the county and breast cancer is the leading cause of cancer deaths among women.



Community Health: Working the Puzzle

PROSTATE EXAMS SUMMARY

- ❖ An estimated 184,500 new cases of prostate cancer were diagnosed in the United States and nearly 39,200 men died from prostate cancer during 1998.
- ❖ Prostate cancer is the second leading cause of cancer deaths among men.
- ❖ Between 1989 and 1992 prostate cancer incidence rates increased dramatically. This increase may be due to the increased use of prostate-specific antigen (PSA) blood test screenings improving detection.
- ❖ Prostate cancer incidence rates and mortality rates are nearly two times higher for black men than white men.
- ❖ OCHNA survey results indicated that only 35.6% of male respondents have had a blood test for prostate cancer detection.
- ❖ As with female breast cancer, the incidence of prostate cancer increases with age. More than 75% of all prostate cancers are diagnosed in men aged over 65.
- ❖ Recent studies suggest an inherited predisposition may be responsible for 5% to 10% of prostate cancers. International studies suggest dietary fat may also be a factor.
- ❖ The American Cancer Society guideline for early prostate cancer detection emphasizes PSA blood tests and digital rectal exams of the prostate gland for men older than 50 and for younger men at higher risk such as black men and men with a strong familial predisposition for prostate cancer.

PROSTATE EXAMS

According to the American Cancer Society (ACS), an estimated 184,500 new cases of prostate cancer were diagnosed in the United States and nearly 39,200 men died from prostate cancer in 1998. Prostate cancer is the second leading cause of cancer deaths among men. Between 1989 and 1992 incidence of prostate cancer increased dramatically. This increase may be due to the increased use of PSA blood test screenings which allow for more effective detection of the disease. A PSA blood test is used to measure a protein that is made by prostate cells. Test results indicating less than 4 ng/ml are usually considered normal, results indicating more than 10 ng/ml are considered high, and values between 4 ng/ml and 10 ng/ml are borderline. In 1993 and 1994 prostate cancer incidence rates declined. Prostate cancer incidence rates and mortality rates from prostate cancer are nearly two times higher for black men than white men.

OCHNA survey results indicated 35.6% of male respondents have had a blood test for prostate cancer detection. (It should be noted that due to a system error, all men 18 and older were asked this question instead of only those aged over 45.) The table below shows the last time survey respondents received a blood test for prostate cancer.

Blood test for prostate cancer	Percentage (%)
Within the past year	65.4
Within the past 2 years	17.8
Within the past 5 years	9.0
More than 5 years ago	7.7

For 93.8% of respondents who had received the blood test, they had received it as part of a routine checkup, 4.7% because of a prostate problem, and 1.5% because of a personal history of prostate cancer.

As with female breast cancer, the incidence of prostate cancer increases with age. More than 75% of all prostate cancers are diagnosed in men aged over 65. Recent studies suggest that an inherited predisposition may be responsible for 5% to 10% of prostate cancers. International studies suggest dietary fat may also be a factor.

Early detection is the key to early treatment. Only 32.1% of male respondents to the OCHNA survey stated they had undergone a digital rectal exam. The ACS guideline for early prostate cancer detection emphasizes PSA blood tests and digital rectal exams of the prostate gland for men aged 50 and older and for younger men at higher risk such as black men and men with a strong familial predisposition for prostate cancer.

DENTAL CARE SUMMARY

- ❖ Oral diseases are among the most common health problems in the U.S.
- ❖ Nationally, according to the Healthy People 2000 Review, in 1997, 45% of school-aged children had cavities in their permanent teeth; 94% of adults showed evidence of current or past tooth decay.
- ❖ According to an article by Perry R Klokkevold, DDS, MS, in the February 1999 issue of the *Journal of the California Dental Association*, evidence suggests there is a relationship between dental disease and an increased risk for several systemic diseases. Specifically, those condition include periodontitis caused by bacterial pathogens that break down the structure of gum attachments and bone which has been associated with an increased risk of coronary heart disease; uncontrolled sugar levels in diabetics; respiratory disease; and preterm, low-birth-weight babies.
- ❖ OCHNA survey results indicated 34.2% of Orange County residents (685,580 people) did not have dental insurance coverage. Consequently, nearly one fourth of the participants who had not seen a dentist in the past year identified cost as the reason for not going to the dentist.
- ❖ An examination of the teeth, cheeks, tongue, and regional lymph glands; cleaning of the teeth and gingiva; and a screening for periodontal disease should be a part every dental checkup.

DENTAL CARE

Oral diseases are among the most common health problems in the United States. According to the 1997 Healthy People 2000 Review, 45% of school-aged children had cavities in their permanent teeth; 94% of adults showed evidence of current or past tooth decay. More than 90% of people over the age of 13 showed some evidence of periodontal problems (loss of attachment).

OCHNA survey results indicated that 34.2% of Orange County residents (685,580 people) did not have dental insurance coverage. Income was a significant indicator of whether a person had dental insurance coverage. The survey showed these additional findings:

- ❖ More than 9% had visited the dentist between 1 and 2 years ago; 10% between 2 and 5 years. Within the past 5 years or more, 7.5% had visited the dentist; 0.7% (14,175 Orange County residents) had *never* visited the dentist. Reasons for not visiting the dentist within the past year are shown below.

Reason	Percentage (%)
No reason to go	32.2
Cost	24.3
Other	14.1
Fear/apprehension	11.9
Other priorities	7.7
Not have/know dentist	5.1
Transportation	2.8
Didn't think of it	2.0

Nearly one fourth of the respondents who had not visited a dentist within the past year identified cost as the reason for not going to the dentist. According to the 1997 Healthy People 2000 Review, the national cost of dental care in 1992 was \$39 billion. In 1989, dental visits or problems resulted in 148 hours of missed work per 100 employees and 117 hours of missed school per 100 students.

Proper tooth brushing and flossing removes the harmful bacteria and bacterial plaque products that cause gingivitis, periodontal disease, and tooth decay. According to an article by Perry R Klokkevold, DDS, MS, in the February 1999 issue of the *Journal of the California Dental Association*, evidence suggests there is a relationship between dental disease and an increased risk for several systemic diseases. Specifically, periodontitis caused by bacterial pathogens that break down the structure of gum attachments and bone has been associated with an increased risk of coronary heart disease; uncontrolled sugar levels in diabetics, respiratory disease, and preterm low-birth-weight babies are other examples.

One report, using data from the 1971 to 1975 National Health and Nutritional Examination Survey, concluded that people with periodontitis had a 25% greater risk of subsequent coronary heart disease than those without periodontitis. Recent research has studied the effects of oral bacteria that cause platelets to clump and lead to a heart attack.

The American Dental Association and the American Academy of Periodontology recommend biannual dental checkups which include an examination of the teeth, cheeks, tongue, and regional lymph glands; cleaning of the teeth and gingiva; and a screening for periodontal disease.

VISION CARE SUMMARY

- ❖ According to the American Macular Degeneration Foundation, Americans fear blindness more than any other disability. As people age their chances for developing eye disease increase dramatically.
- ❖ Macular degeneration, diabetic retinopathy, glaucoma, and cataracts are 4 potential causes of blindness.
- ❖ Macular degeneration, specifically age-related macular degeneration (AMD), is the most common cause of legal blindness among older persons in the United States.
- ❖ Glaucoma is one of the leading causes of preventable blindness in the United States and is a leading cause of blindness in the black population. Glaucoma occurs 6 to 8 times more often in blacks than whites.
- ❖ By age 75, nearly everyone has had a cataract. In fact, cataract surgery is the number one therapeutic surgical procedure performed on Americans aged 65 and older.
- ❖ Vision health coverage is important in reducing the risk of blindness through preventive measures such as regular eye exams. Those persons with vision health coverage are more likely to visit their doctor to seek preventive treatment than those without vision health coverage.
- ❖ More than 44% of OCHNA survey respondents (871,125 people) are without vision health coverage. Most people without vision health coverage were in the low income category.

VISION CARE

According to the American Macular Degeneration Foundation, Americans fear blindness more than any other disability. As people age, their chances for developing eye disease increase dramatically.

Macular degeneration, diabetic retinopathy, glaucoma, and cataracts are 4 potential causes of blindness. According to the Retina Center, macular degeneration, specifically AMD, is the most common cause of legal blindness among older persons in the United States. The deterioration of the macula, or central portion of the retina, characterizes this disease. Available treatment for AMD is limited. Laser treatment is an option only for a select few who meet the criteria. Preventive measures that have been demonstrated to reduce the risk of vision loss from AMD include the following:

- ❖ Eating a diet rich in green, leafy vegetables
- ❖ Not smoking

In addition, vitamin and mineral supplements such as zinc, selenium, and vitamin E have been recommended for individuals with AMD.

According to the Retina Center, diabetic retinopathy refers to disease of the retina caused by diabetes. The high sugar levels of diabetics damage blood vessels throughout the body including vessels in the eyes. Diabetic retinopathy is the leading cause of blindness among working-age Americans. Therefore, it is crucial for people with diabetes to have regular vision checkups. OCHNA survey results indicated 5.8% of residents (118,161) have been diagnosed with diabetes, of which 15.3% have not received treatment. According to the Retina Center, diabetics who have regular screening eye exams and laser treatment instituted immediately can reduce the risk of severe visual loss by more than 90%.

According to the American Academy of Ophthalmology (AAO), glaucoma is one of the leading causes of preventable blindness in the United States. Glaucoma occurs when the optic nerve which carries visual images to the brain is damaged. Pressure builds in the eye when the clear liquid which flows in and out of the eye is prevented from draining properly. The resulting pressure can damage the optic nerve. As glaucoma progresses, small blind spots may develop. Most people do not notice the blind spots, however, until significant optic nerve damage has taken place. Blindness results when the entire nerve is destroyed.

Glaucoma is a leading cause of blindness in the black population and occurs 6 to 8 times more often among blacks than whites. Although exact reasons for this high rate among blacks are unknown, contributing factors may be a greater susceptibility to optic nerve damage, a higher prevalence of earlier onset intraocular pressure, and lower utilization of resources for detection and treatment of glaucoma.

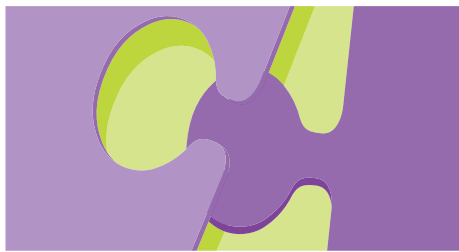
According to the AAO, a cataract is a cloudy or opaque area in the normally transparent lens of the eye. As the opacity thickens, it prevents light rays from passing through the lens and focusing on the retina. Symptoms include blurred vision, sensitivity to light and glare, increased nearsightedness, and distorted images.

People between the ages of 52 and 64 have a 50% chance of developing cataracts. By age 75, nearly everyone has had a cataract. In fact, cataract surgery is the number one therapeutic surgical procedure performed on Americans aged 65 or older. According to the AAO, Medicare pays \$3.4 billion per year for one million of the approximately 1.3 million cataract procedures performed annually.

Recent studies indicate people living in high altitude areas and those who spend a lot of time in the sun may develop cataracts earlier than other populations. Studies also suggest people with diabetes and users of steroids, diuretics, and major tranquilizers are at greater risk for cataracts.

Vision health coverage is important in reducing the risk of blindness through preventive measures such as regular eye exams. People with vision coverage are more likely to visit their doctors to seek preventive treatment.

More than 44% of OCHNA survey respondents (871,125 people) did not have vision health coverage. The greatest number of people without vision health coverage were in the low income category. Therefore, income was an indicator of whether people have vision health coverage.



Community Health: Working the Puzzle

IMMUNIZATIONS SUMMARY

- ❖ The development and widespread use of vaccines have been instrumental in reducing the incidence of infectious diseases, particularly childhood diseases.
- ❖ Immunization levels among children are the highest ever recorded in the U.S.
- ❖ OCHNA survey results indicated that only 28.7% of the respondents received an influenza shot within the past 12 months; 68.7% received the vaccination at no cost. Slightly more than 13% had received pneumonia vaccinations.
- ❖ Many barriers to immunizations exist. Some of these include parents relying on physicians to maintain an accurate record of each child's immunizations, parents' confusion over the complex immunization schedule and card, and non-English speaking parents' need for materials in their native language.
- ❖ Each year 150,000 people get hepatitis B. Between 4,000 and 5,000 people die from Hepatitis B, and 11,000 people receive hospital care.
- ❖ Measles can lead to ear infections, pneumonia, seizures, brain damage, and death.
- ❖ Mumps can lead to hearing loss, meningitis, and, in males, infertility.
- ❖ Rubella can cause pregnant women to lose their babies and can cause birth defects such as blindness, deafness, heart disease, brain damage, and other serious problems.
- ❖ Polio can cause paralysis and, in some cases, death.
- ❖ Diphtheria can lead to breathing problems, paralysis, heart failure, and even death.
- ❖ Tetanus causes painful tightening of the muscles, usually all over the body. It can also lead to tightening of the jaw (lockjaw) resulting in inability to open one's mouth or swallow. It can lead to death.
- ❖ Pertussis can lead to pneumonia, seizures, brain damage, and death.
- ❖ Reducing the risk of death, hospitalization, and disability through immunization will save money. It is estimated that for every dollar spent on measles, mumps and rubella vaccines, more than \$21 is saved in direct medical care costs. For every dollar spent on diphtheria, pertussis and tetanus vaccines, more than \$30 is saved. For every dollar spent on polio vaccines, more than \$6 is saved.

IMMUNIZATIONS

The development and widespread use of vaccines have been instrumental in reducing the incidence of infectious diseases, particularly childhood diseases. According to the 1997 Healthy People 2000 Review, immunization levels among children are the highest ever recorded in the United States. The proportion of children aged 19 to 35 months old who have been fully immunized increased from 68% in 1994 to 76% in 1995.

The table below shows the number of vaccine-preventable diseases in Californian and Orange County in 1997.

Disease	California (cases)	Orange County (cases)	Healthy People 2000 Target (cases)
Diphtheria	0	0	0
Tetanus	0	0	0
Polio (wild type)	0	0	0
Measles	12	4	0
Rubella	1	0	0
Mumps	140	11	500
Pertussis	216	12	1,000

Pneumonia and influenza vaccinations among people older than 65 and blacks increased between 1994 and 1995. Among Latinos/Hispanics in the same age range, pneumonia immunizations increased while influenza immunizations decreased. Immunization coverage among older blacks and Latinos/Hispanics remains substantially below the coverage in the total population.

OCHNA survey results indicated that only 28.7% of respondents received an influenza vaccination within the last 12 months; 68.7% received the vaccination at no cost. Just over 13% of participants received pneumonia vaccinations and 85.5% received tetanus vaccinations.

There are financial barriers to obtaining immunizations. According to the 1997 Healthy People 2000 Review, among employment-based health coverage plans, immunizations were covered in only 53% of conventional plans, 65% of preferred provider organization plans, and 95% of HMOs. OCHNA survey results indicated that the majority of respondents with health care coverage belonged to an HMO.

There are other barriers to immunization. In an assessment conducted by Children Now, the following findings were reported:

- ❖ Parents relied on their child's physician to raise the issue of immunizations. Parents believed it was the physician's responsibility to maintain an accurate record of each child's immunizations and to ensure each received all recommended vaccinations.
- ❖ Parents expressed confusion over the complex immunization schedule and immunization card. They suggested more readily accessible and more comprehensible information be made available.
- ❖ Non-English speaking parents expressed the need for information available in their native language and more cultural awareness among doctors.
- ❖ Parents perceived cost, fear of child's reaction, parental attitudes, parental ignorance regarding the importance of vaccines, and limited private provider office hours as barriers to on-time immunizations.
- ❖ Office staff indicated communication problems (e.g., language, illiteracy or low literacy, and cultural differences), pain to the child, patients who move often, appointment availability, chronically sick children, and limited office hours as barriers to on-time immunizations.

- ❖ Physicians mentioned inadequate screening and tracking techniques, chronically sick children, parents' fears of vaccines, health coverage reimbursement problems, children without immunization records, children who change providers often, and limited clinic hours as barriers to on-time vaccinations.

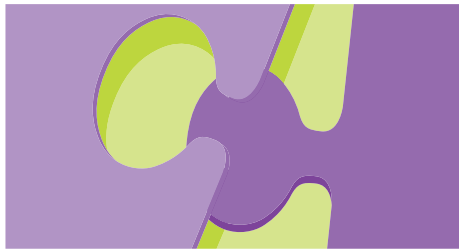
According to a 1998 Orange County HCA bulletin, the following list highlights additional reasons parents do not immunize their children:

- ❖ Clinic waiting periods
- ❖ Parental procrastination
- ❖ Office understaffing
- ❖ Fear in the Latino/Hispanic community, including the belief that children will get sick from the immunization and the fear of deportation if they were not documented or arrived illegally to the U.S.
- ❖ Among the Vietnamese community, there was an overconfidence in the American medical system. They believe that any disease can be cured so preventive measures are not necessary.
- ❖ Overly complicated reimbursement procedures for providers
- ❖ Parental lack of knowledge about the kinds of disease immunizations are intended to prevent
- ❖ Parental dependence on physicians for the selection and scheduling of immunizations

Vaccines are needed to reduce death, disability, and hospitalization due to preventable infectious diseases. The Centers for Disease Control and Prevention, Vaccination Statements and the U.S. Department of Health and Human Services show how each of these diseases can affect individuals:

- ❖ Each year 150,000 people get hepatitis B. Between 4,000 and 5,000 people die from Hepatitis B, and 11,000 people receive hospital care.
- ❖ Measles can lead to ear infections, pneumonia, seizures, brain damage, and death.
- ❖ Mumps can lead to hearing loss, meningitis, and, in males, infertility.
- ❖ Rubella can cause pregnant women to lose their babies and can cause birth defects such as blindness, deafness, heart disease, brain damage, and other serious problems.
- ❖ Polio can cause paralysis and in some cases death.
- ❖ Diphtheria can lead to breathing problems, paralysis, heart failure, and even death.
- ❖ Tetanus causes painful tightening of the muscles usually all over the body. It can also lead to tightening of the jaw (lockjaw) resulting in inability to open one's mouth or swallow. It can lead to death.
- ❖ Pertussis can lead to pneumonia, seizures, brain damage, and death.

Reducing the risk of death, hospitalization, and disability through immunization can save money. It is estimated that for every dollar spent on measles, mumps and rubella vaccines, more than \$21 is saved in direct medical care costs. For every dollar spent on diphtheria, pertussis and tetanus, more than \$30 is saved. For every dollar spent on polio vaccines, more than \$6 is saved. According to the Every Child by Two organization, it is estimated that the 1989-1991 measles outbreak cost more than \$100 million in direct medical care.



Community Health: Working the Puzzle

CONTRACEPTION SUMMARY

- ❖ The most common contraception methods are abstinence, tubal sterilization or vasectomy, Depo-Provera, oral contraceptives, and condoms.
- ❖ 42% of OCHNA survey respondents indicated they were using some form of contraception. Nearly 30% were using condoms and 28.3% were using oral contraceptives.
- ❖ Oral contraceptives are 97% to 99.9% effective in preventing pregnancy but they do not prevent sexually transmitted diseases. Condoms, when used properly and consistently, guard against pregnancy and sexually transmitted diseases.

CONTRACEPTION

For individuals who participate in sexual activities and want to reduce the risk of becoming pregnant, a variety of contraceptive choices are available. The most common contraceptive methods:

- ❖ **Abstinence** is the practice of refraining from sexual activity. Abstinence not only prevents pregnancy but also guards against the possibility of contracting or transmitting sexually transmitted diseases (STDs). Abstinence is the only foolproof method of preventing pregnancy.
- ❖ **Tubal sterilization or vasectomy** offers permanent protection from pregnancy provided through surgical procedures, but does not protect against STDs. Such methods are extremely effective in preventing pregnancy. Because of the permanent nature of these procedures, however, they should be considered only by those who are not planning ever to have children.
- ❖ **Depo-Provera**, a synthetic hormone, provides a reversible method of birth control, which is administered by a doctor in the form of an injection. Depo-Provera must be re-injected every 12 weeks; it has been found to be 99.7% effective in guarding against pregnancy. It does not provide any protection, however, from STDs.
- ❖ **Oral contraceptives** are a reversible method of birth control provided with a physician's prescription. They consist of hormones, usually estrogen and/or progestin. They are very effective (97-99.9%) in preventing pregnancy, but do not prevent STDs.
- ❖ **Condoms** are inexpensive and available over-the-counter. They guard not only against pregnancy but are also effective (when used properly and consistently) in protecting against STDs.

Forty-two percent of OCHNA survey respondents indicated that they were using some form of contraception.

Results indicated the following pattern of contraceptive use in Orange County:

Method of Contraception	Percentage (%)
Condoms	29.9
Oral contraceptives	28.3
Vasectomy	17.3
Tubal ligation	14.1
Other	4.7
Shots (Depo-Provera)	2.7
Diaphragm	1.1
Norplant	1.0
Foam, jelly, cream	0.6
Withdrawal	0.4

The two most frequently used forms of birth control, condoms (29.9%) and oral contraceptives (28.3%), have distinct advantages. Both forms are easily obtained. Condoms are available over-the-counter and prescriptions for oral contraceptives can be obtained from family physicians or community clinics that offer their services at minimal or no cost. Oral contraceptives are convenient to use, while condoms offer protection against STDs.

Individuals who do not use any form of contraception do so for varied reasons. Some may not be engaging in sexual intercourse, some do not use contraception for religious reasons, and others may simply not

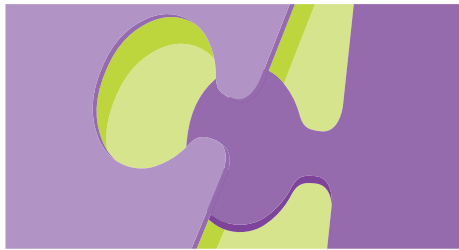
want to use contraception. More than one third (37.6%) of the survey participants indicated they were not using contraception because they were not engaging in sexual activity; 6.8% were trying to get pregnant, and nearly 10% responded they did not want to use contraception or had a partner who did not want to use contraception. Not using contraception could result in a number of unplanned pregnancies and/or STD transmission.

OCHNA survey indicated the following reason for not using contraceptives:

Reason for not using contraception	Percentage (%)
Other	39.8
Not having sex	37.6
Want to get pregnant	6.8
Don't think they can get pregnant	6.4
Partner doesn't want to use birth control	4.8
Don't want to use birth control	4.5
Can't pay for birth control	0.1

Survey results indicated that cost was not a significant reason for not using contraception. However, income was an indicator of whether contraception was used. People making more than \$50,000 a year were more likely to use contraception than those making less than \$20,000 a year.

Of the 39.8% of participants not using contraception for “other” reasons, many indicated they were either past the age of childbearing or had a surgical procedure such as tubal ligation or vasectomy.



Community Health: Working the Puzzle

PRENATAL HEALTH SUMMARY

- ❖ Birth weight is one of the most important predictors of the overall health status and survivability of newborn infants.
- ❖ Many factors contribute to the overall health status of newborn infants including a short gestation period, adequacy of prenatal care, multiple births, adolescent mothers, and mothers over the age of 40.
- ❖ A high infant mortality rate indicates unmet health needs and unfavorable environmental factors such as low income, poor nutrition, poor education, unsanitary conditions, and inadequate medical care.
- ❖ The leading causes of infant mortality are short gestation and low birth weight, congenital anomalies, sudden infant death syndrome (SIDS), and respiratory distress syndrome (RDS).
- ❖ Infant mortality varies substantially by race and ethnicity.
- ❖ According to the Institute of Medicine, for every dollar spent on prenatal care, \$3.38 is saved in the costs of care for a low-birth-weight infant.
- ❖ More than one third of pregnant women receive prenatal care that is inadequate in the timing and/or frequency of visits. Compliance with regular prenatal care is lower among women who are young, have less than a high school education, have three or more children, or are unmarried.

PRENATAL HEALTH

According to the State Department of Health Services, birth weight is one of the most important predictors of the overall health status and survivability of newborn infants. A low-birth-weight infant is defined as weighing less than 2,500 grams (4 lbs., 11 oz.) at birth. Reducing the incidence of low-birth-weight infants is one of the Healthy People 2000 objectives.

Many factors contribute to the overall health status of newborn infants:

- ❖ Length of gestation is one factor affecting birth weight. Infants born prior to 37 weeks gestation have a greater risk of being born at low birth weights.
- ❖ Adequacy of prenatal care is another factor affecting birth weight. Prenatal care that begins early (within the first 12 weeks) and continues throughout pregnancy is instrumental in preventing low-birth-weight and premature babies. Mothers who do not receive prenatal care are 2.8 times more likely to have a low-birth-weight infant as mothers who receive adequate prenatal care.
- ❖ Plurality is another factor. Infants of multiple births will have lower birth weights.
- ❖ Infants born to black mothers are also at higher risk of low birth weight. Black mothers have approximately 2 times the incidence of low-birth-weight infants than mothers in other ethnic groups.
- ❖ Mothers aged 40 and older have approximately twice as many low-birth-weight infants as mothers in other age groups.

The risk of low birth weight is known to be associated with late and inadequate prenatal care. Prenatal care received after 12 weeks gestation is termed late prenatal care or prenatal care not received in the first trimester. Early prenatal care provides an excellent opportunity to detect and treat maternal and fetal medical problems as well as offer counseling on healthy habits and lifestyles.

Births to adolescent mothers have increased; they are considered medically risky and socially unhealthy. A teenaged mother causes medical and social problems for herself as well as for her infant and the community.

Infant death is defined as a death occurring within 365 days of birth. The infant mortality rate traditionally has been considered of great significance in public health. A high rate indicates unmet health needs and unfavorable environmental factors such as low income, poor nutrition, low education levels, poor sanitation, and inadequate medical care. The leading causes of infant mortality are short gestation and low birth weight, congenital anomalies, sudden infant death syndrome, and respiratory distress syndrome. Infant mortality varies substantially by race and ethnicity. For example, mortality rates are higher for black infants than for Asian and white infants. Between 1994 and 1996, there were 753 infant deaths in Orange County, resulting in an average of 251 infant deaths per year.

Data collected by the Orange County Health Care Agency (HCA), California Department of Health Services (CDHS), and the California Department of Finance (CDF) provide the following mortality rates per 1,000 live births:

Population groups	Orange County	California	United States
Black	10.3	15.3	16.5
Latino/Hispanic	6.2	6.4	N/A
Asian and other	6.0	5.8	N/A
All infants	5.8	7.0	8.0
White	5.1	6.3	6.8

Data collected by the Orange County HCA, CDHS, and the CDF provide the following birth related rates. Births to adolescents are the number of births per 1,000 females aged 15 to 19. Low birth weight, late prenatal care, and inadequate prenatal care rates are percentages of total births.

Birth Related	Orange County	California	United States
Births to adolescents (per 1,000 females, 15-19 years)	59.3	66.6	56.6
Inadequate prenatal care	28.9	31.4	N/A
Late prenatal care	17.7	20.9	18.7
Low birth weight	5.3	6.1	7.3

According to the Institute of Medicine, for every dollar spent on prenatal care, \$3.38 is saved in the costs of care for a low-birth-weight infant. Nationally, however, only three fourths of all babies are born to women who received early care. More than one third of pregnant women receive prenatal care that is inadequate in the timing and/or frequency of visits. Compliance with regular prenatal care is lower among women who are young, have less than a high school education, have three or more children, or are unmarried. In addition, these data are provided by the 1996 Orange County Maternal and Child Health Needs Assessment:

- ❖ In 1996, there were approximately 47,825 births in Orange County.
- ❖ Low birth weight was the single greatest complication for newborns. Women who failed to receive prenatal care were 3 times more likely to deliver a low-birth-weight baby.
- ❖ Costs associated with less than optimal birth outcomes may be reduced if early prenatal care is maximized.
- ❖ Newborns born prematurely or too small can require increased hospital and provider resources, including time in a neonatal intensive care unit at costs ranging from \$1,000 to \$2,500 per day.
- ❖ Women infected with an undiagnosed (due to lack of prenatal care) communicable disease continue to transmit the disease to their partners and babies. This circle of infection threatens the public health of the entire community.

Orange County Health Care Agency Secondary Data Infant Mortality Indicators

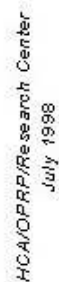
Infant Mortality Rate

An infant death is defined as a death occurring within 365 days of birth. The infant mortality rate traditionally has been considered of great significance in public health. A high rate has been taken to indicate unmet health needs and unfavorable environmental factors, such as low income and poor nutrition, education, sanitation, and medical care. The infant death rate is based on number of deaths per 1,000 live births.

The leading causes of infant mortality are short gestation and low birth weight, congenital anomalies, sudden infant death syndrome (SIDS), and respiratory distress syndrome (RDS).

Infant mortality rates vary substantially by race and ethnicity. For example, mortality rates are highest for the infants of black mothers compared to Asian and white mothers. Mortality rates by race or ethnicity were analyzed for Orange County as well as the 27 hospital service areas. The racial/ethnic categories for analyses in this report are white, Latino/Hispanic, black, and Asian, and other. Please note that the “other” category includes southwest Asian, Pacific islanders and other sub-population groupings.

In Orange County, the number of infant deaths averaged about 251 per year; therefore, analyzing it by race or ethnicity by zip code would not yield statistically significant rates.



Source: Orange County Vital Statistics 1994-96

Orange County Health Care Agency

Secondary Data

Birth Indicators

Live Births

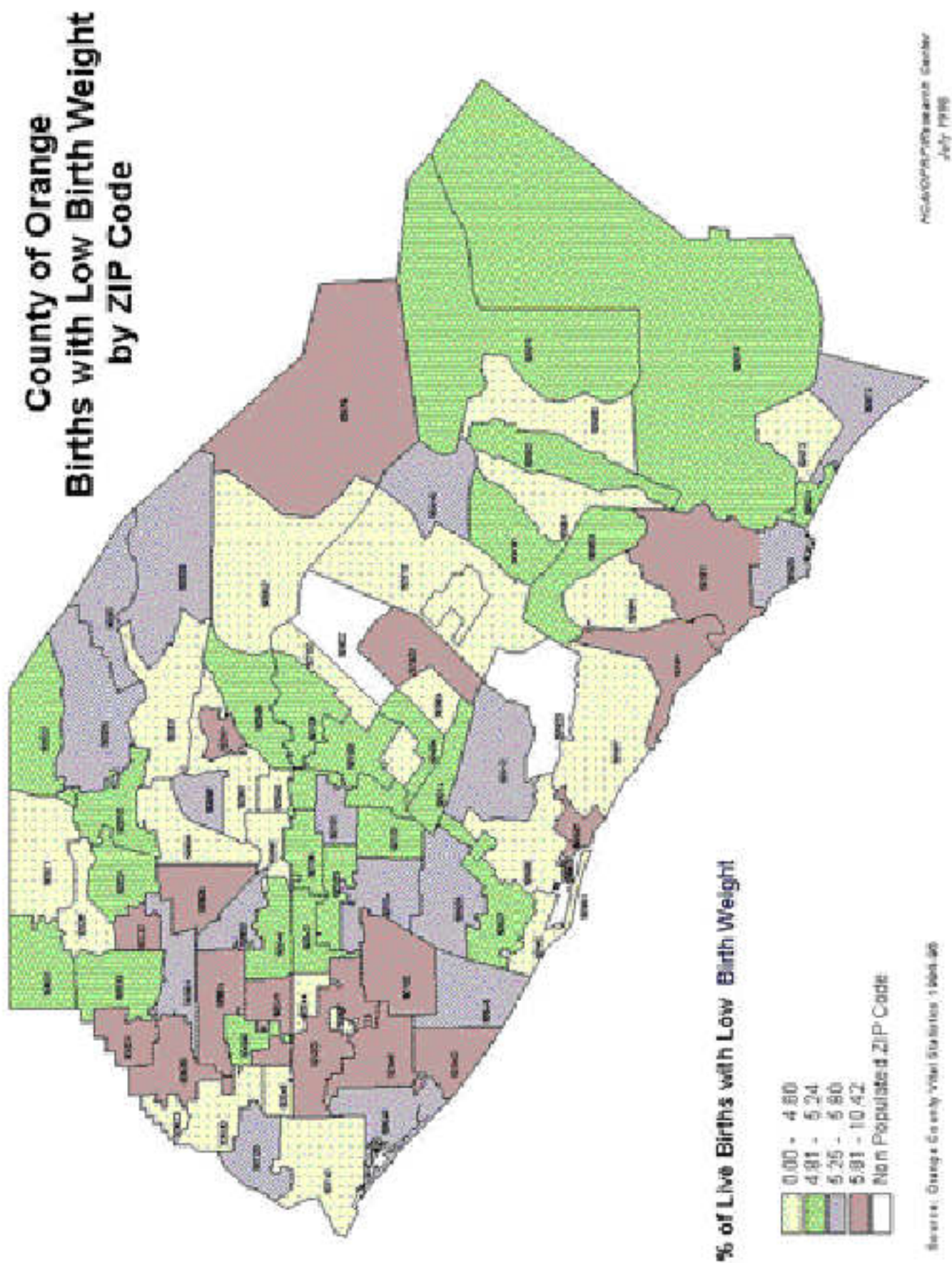
A live birth is defined as the complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy) which, after such separation, breathes, or shows any other evidence of life such as the beating of the heart, pulsating of the umbilical cord, or definite movement of voluntary muscles. This definition was formulated by the World Health Organization in 1950, and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3. Birth is, undoubtedly, the most significant event in an individual's life. It plays a major role in the formulation, implementation, and dispersion of health care as well as social and economic services. One of the major goals of the health services agency is to ensure a risk-free and positive birth outcome and to minimize the cost resulting from complications of pregnancy and birth. The following indicators were used in this assessment.

Low-Birth-Weight Rate - A low-birth-weight infant is defined as an infant weighing less than 2,500 grams of weight at birth. The risk of low birth weight is known to be associated with late and inadequate prenatal care. This indicator is based on the number of live births and is shown in percentages.

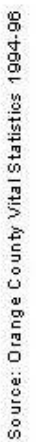
Births to Adolescent Mothers (age 15-19) - Births to adolescent mothers are considered not only medically risky but also socially unhealthy. Such births pose medical and social problems for the mother as well as her infant and the community. This indicator is based on the total number of live births among women aged 15 to 19 years per 1,000 females of the same age in the population over a given period of time.

Prenatal Care Not Received in the First Trimester - Prenatal care received after 12 weeks gestation is termed late prenatal care or prenatal care not received in the first trimester. Such late or lacking prenatal care is considered a high risk factor because it can lead to an unhealthy birth outcome. Early prenatal care provides an excellent opportunity to detect and treat maternal and fetal medical problems as well as to offer counseling on healthy habits and lifestyles, thus ensuring a positive birth outcome. This indicator is based on the total number of live births and is presented in percentages.

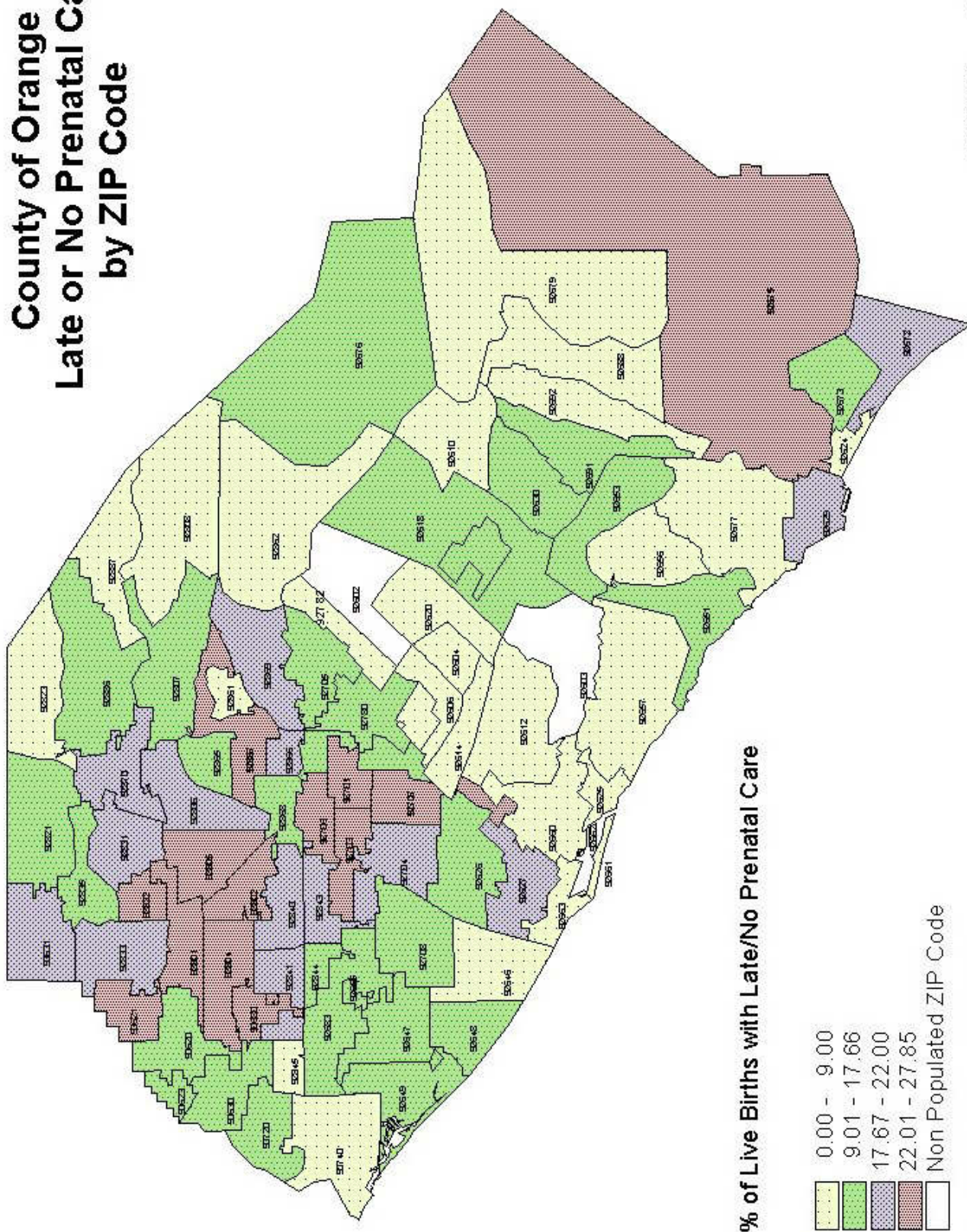
Kessner Index or Not Adequate Prenatal Care - This index was developed by David Kessner, MD, in the early 1970s and is widely used to determine the adequacy of prenatal care. This index is a function of the number of prenatal care visits and gestational age. It specifies the number of prenatal care visits required for a specific number of weeks of gestation. This indicator is based on the total number of live births and is presented in percentages.



**Births to Adolescent Mothers
per 1000 Females Age 15 to 19**



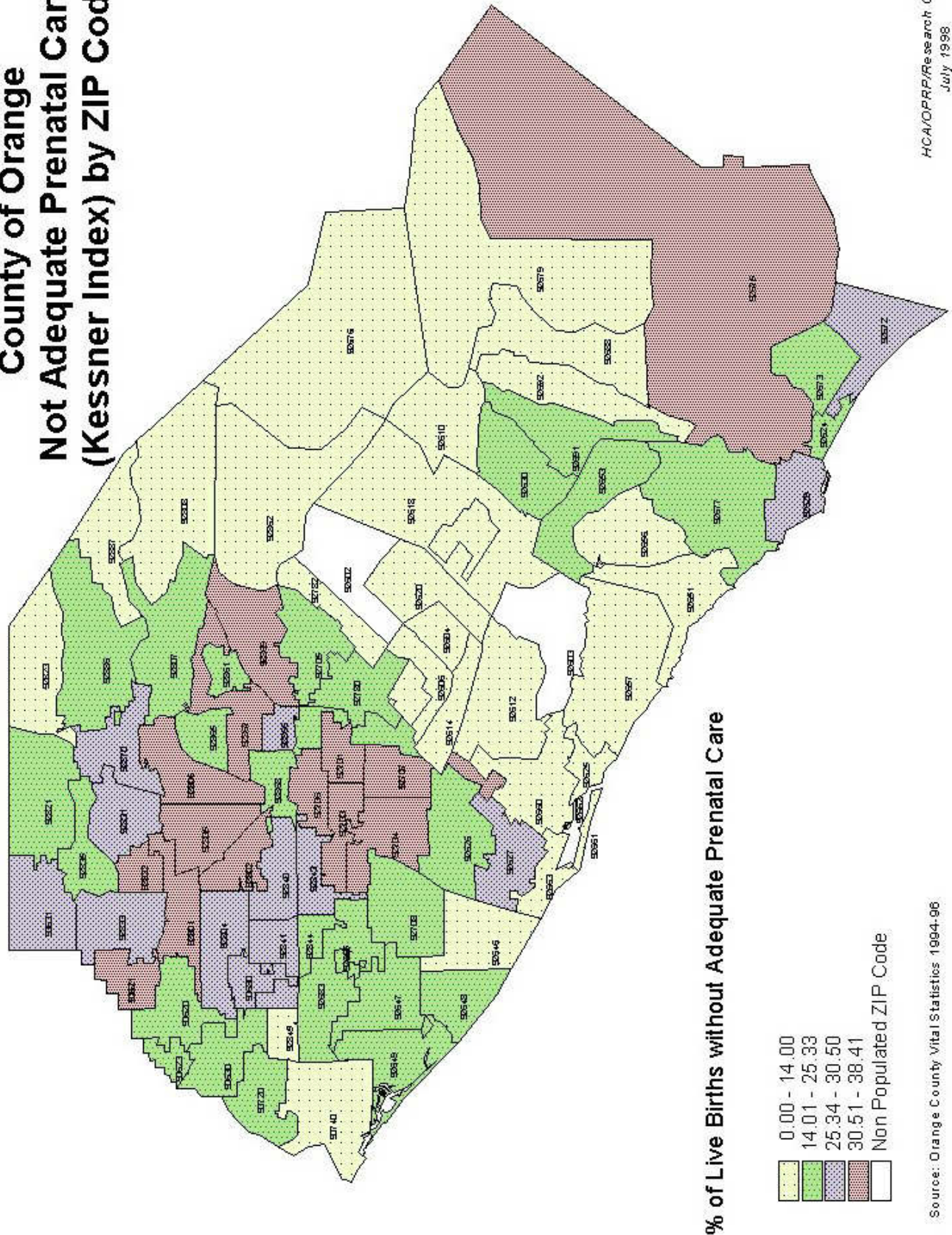
County of Orange Late or No Prenatal Care by ZIP Code



Source: Orange County Vital Statistics 1994-96

HCA/OPAP/Research Center
July 1998

County of Orange Not Adequate Prenatal Care (Kessner Index) by ZIP Code



ALTERNATIVE HEALTH CARE SUMMARY

- ❖ Alternative health care emphasizes prevention and patient empowerment and knowledge.
- ❖ Nearly 69% of Americans used some form of alternative medicine in the last year.
- ❖ Alternative therapies were most frequently used for chronic conditions, including back problems, anxiety, depression, and headaches.
- ❖ Only 38.5% of patients disclosed their use of alternative therapies to their physicians. Additionally, 58.3% of all alternative therapy users paid for the expense themselves.
- ❖ The National Association of Insurance Commissioners found in a survey that most of the nation's largest HMOs offered chiropractic care, one third offered acupuncture, 28% paid for relaxation therapy, and 14% reimbursed for massage therapy and hypnosis.
- ❖ National survey results showed use of alternative therapies was not confined to any particular socioeconomic group. Use was more common, however, among women (48.9%), people aged 35 to 49 years (50.1%), those who had some college education (50.6%), and those who lived in the West.
- ❖ More than 27% of OCHNA survey respondents indicated that they used alternative therapies within the past year; 59.8% of those used this form of therapy in response to a specific health condition.

ALTERNATIVE HEALTH CARE

Alternative/complementary medicine is gaining popularity in America. It is being used by people looking for more natural forms of healing. According to a study conducted by the Stanford Center for Research in Disease Prevention, 69% of Americans used some form of complementary medicine in the last year. Such health care emphasizes prevention and patient empowerment and knowledge. Alternative medicine can include acupuncture, aromatherapy, ayurvedic medicine, bodywork (massage), herbal therapies, homeopathy, mind-body medicine (biofeedback, guided imagery, hypnotherapy, meditation, and yoga), naturopathy, and nutrition diet. Chiropractic is one of the better-known alternative medicines, and many people consider it a part of mainstream medical treatment.

In 1992, the National Institutes of Health, reacting to the public's interest in alternative therapies, opened the Office of Alternative Medicine. This office studies alternative medicine such as St. John's Wort, an herb used to alleviate depression.

According to a national survey from the Center for Alternative Medicine Research and Education, Department of Medicine, Beth Israel Deaconess Medical Center and the Department of Health Care Policy, and Harvard Medical School, 42.1% of Americans had used at least one of 16 alternative therapies during the previous year. Alternative therapies were most frequently used for chronic conditions, including back problems, anxiety, depression, and headaches. Only 38.5% of patients disclosed their use of alternative therapies to their physicians. Additionally, 58.3% of all alternative therapy users paid for the expense themselves.

The National Association of Insurance Commissioners found in a survey that most of the nation's largest HMOs offered chiropractic care, one third offered acupuncture, 28% paid for relaxation therapy, and 14% reimbursed for massage therapy and hypnosis.

National survey results showed that use of alternative therapies was not confined to any particular socioeconomic group. Use was more common, however, among women (48.9%), people aged 35 to 49 years (50.1%), those who had some college education (50.6%), and those who lived in the West.

Corresponding with the above statistics, 562,785 people (27.7% of OCHNA survey respondents) in Orange County used alternative therapy within the past year; 59.8% used such therapy in response to a specific health condition. The majority of respondents felt that alternative therapy was "somewhat effective" to "very effective" with 32.1% responding that the therapy was "very effective." The majority of alternative therapy users (65.7%) used the therapy in conjunction with traditional medical treatment. Finally, those persons in the high income category had a greater incidence of using alternative therapy than those in the low income category.